This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of manufacturing a charge-coupled image sensor, wherein photo-charge generating channel-shaped semiconductor regions running in a first direction are formed in a silicon slice so as to adjoin a surface thereof by implantation of ions of dopants and subsequent thermal treatments, wherein the surface of the silicon slice is provided with a gate dielectric comprising a layer of silicon oxide and a silicon nitride layer deposited thereon, and wherein a system of strip-shaped electrodes is formed on the gate dielectric, said strip-shaped electrodes running in a second direction which is substantially perpendicular to the first direction, characterized in that the silicon nitride layer is formed by low pressure chemical vapor deposition and that the photo-charge generating channel-shaped semiconductor regions are not formed in the silicon slice until after the gate dielectric has been provided on the surface of the silicon slice, all of the ions of the dopants of a polarity type defining the photo-charge generating channel-shaped semiconductor regions being implanted through the gate dielectric and the photo-charge generating channel-shaped semiconductor regions are formed in the silicon slice before the strip-shaped electrodes are formed on the gate dielectric.

2. (cancelled)

3. (previously presented) A method as claimed in claim 1, characterized in that the silicon nitride layer is deposited in a thickness of at least 50 nm.

4. (currently amended) A method of manufacturing a charge-coupled image sensor comprising:

providing a gate dielectric on a surface of a silicon slice by forming a layer of silicon oxide on the surface and depositing a silicon nitride layer on the layer of silicon oxide;

forming a plurality of elongate photo-charge generating channels in the silicon slice by implanting all of the dopant ions of a polarity type defining the photo-charge generating channels through the gate dielectric into the silicon slice, the photo-charge generating channels being formed so as to adjoin the surface; and

forming a system of elongate gate electrodes on the gate dielectric after the photo-charge generating channels are formed, the elongate electrodes being formed transversely to the photo-charge generating channels.

5. (previously presented) A method as claimed in claim 4, characterized in that the silicon nitride layer is deposited on the silicon oxide layer by means of a LPCVD (Low Pressure Chemical Vapor Deposition) process.

6. (previously presented) A method as claimed in claim 5, characterized in that the silicon nitride layer is deposited in a thickness of at least 50 nm.

7. (previously presented) A method as claimed in claim 1, wherein:

the charge coupled image sensor includes buried channels; and

the photo-charge generating channel-shaped semiconductor regions constitute the buried channels.

8. (previously presented) A method as claimed in claim 4, wherein:

the charge coupled image sensor includes buried channels; and

the elongate photo-charge generating channels constitute the buried channels.

9. (previously presented) A method as claimed in claim 1, wherein the gate dielectric is formed before any other dielectric layer is formed in an active area of the image sensor.

10. (previously presented) A method as claimed in claim 9, wherein the gate dielectric is kept intact after the gate dielectric layer is formed.

11. (previously presented) A method as claimed in claim 9, wherein the gate dielectric is kept intact during any subsequent process that one of deposits a dielectric layer in the active area of the image sensor and removes a dielectric layer in the active area of the image sensor.

12. (previously presented) A method as claimed in claim 4, wherein the gate dielectric is formed before any other dielectric layer is formed in an active area of the image sensor.

13. (previously presented) A method as claimed in claim 12, wherein the gate dielectric is kept intact after the gate dielectric layer is formed.

14. (previously presented) A method as claimed in claim 12, wherein the gate dielectric is kept intact during any subsequent process that one of deposits a dielectric layer in the active area of the image sensor and removes a dielectric layer in the active area of the image sensor.